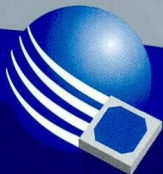


ALTERA®

**Altera® CD
Installation Guide**



QUARTUS® II

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By using the programs on the Altera CD-ROMs that are enclosed in your Altera package, you indicate that you have read and accepted the terms of the Altera software license agreement.

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Altera Software CD-ROMs Supported by this Guide

The installation instructions in this guide apply to the following software CD-ROM versions (some listed CD-ROMs may not be included in your current Altera® package):

- Quartus® II Design Software for PCs Version 2.2
- Quartus II Design Software for UNIX Workstations (Solaris 2.6, 7, and 8 Only) Version 2.2
- Quartus II Design Software for Linux Workstations (Red Hat Linux 7.1 Only) Version 2.2
- Quartus II Design Software for UNIX Workstations (HP-UX 11.0 Only) Version 2.2
- SOPC Builder System Development Tool for PCs Version 2.7:
 - SOPC Builder Tool
 - Nios® Embedded Processor–OpenCore® Plus Hardware Evaluation Version
 - Red Hat GNUPro Software Development Toolkit (for ARM and Nios processors)
- SOPC Builder System Development Tool for UNIX Workstations (Solaris and HP-UX) Version 2.7:
 - SOPC Builder Tool
 - Nios Embedded Processor–OpenCore Plus Hardware Evaluation Version
 - Red Hat GNUPro Software Development Toolkit (for ARM and Nios processors)
- MAX+PLUS® II Design Software for PCs Version 10.2
- MAX+PLUS II Design Software for UNIX Workstations Version 10.2
- ARM® Developer Suite (ADS) Lite Version 1.1 Tools for Excalibur™ Devices
- Altera VHDL & Verilog HDL Synthesis & Simulation Tools for Use With the Quartus II & MAX+PLUS® II Software:
 - Model Technology™ ModelSim® Software Version 5.6a
 - Mentor Graphics® LeonardoSpectrum™ Software Version 2002e

Installing the Quartus II Software on PCs

You can install the Quartus® II software on PCs running Microsoft Windows NT 4.0 (Service Pack 3 or later), Windows 98, Windows 2000, or Windows XP. Before installing the Quartus II software or any Altera® programming hardware, you should read the Quartus II **readme.txt** file, which provides information on Quartus II software and operating requirements, including disk space and memory. You should also refer to the *Quartus II Installation & Licensing for PCs* manual and the *Quartus II Software Release Notes* (http://www.altera.com/literature/rn/rn_qts.pdf) for more information.

To install the Quartus II software on a PC, follow these steps:

1. Insert the Quartus II Design Software for PCs CD-ROM into your CD-ROM drive.
2. Click **Install Quartus II Software** to install the Quartus II software.

or

If the Quartus II software CD-ROM is in your CD-ROM drive, and the Setup program is not running, you can start it manually. Choose **Run** (Start menu) and type the following command:

<CD-ROM drive>: \install.exe ←

The Setup program starts automatically and guides you through the installation process. If necessary, you can run the Setup program again to install additional features of the software.

Installing the Quartus II Software on Solaris Workstations

You can install the Quartus® II software on a Sun Ultra workstation running Solaris 2.6, 7, or 8. Before you install the Quartus II software or any Altera® programming hardware, you should read the Quartus II **readme.txt** file, which provides information on Quartus II software and operating requirements, including disk space, memory, and required operating system patches. You should also refer to the *Quartus II Installation & Licensing for UNIX and Linux Workstations* manual and the *Quartus II Software Release Notes* (http://www.altera.com/literature/rn/rn_qts.pdf) for more information.



Your workstation must have an ISO 9660 CD-ROM drive.

To install the Quartus II software on a Solaris workstation, follow these steps:

1. Insert the Quartus II Design Software for UNIX Workstations (Solaris 2.6, 7, and 8 Only) CD-ROM into your CD-ROM drive.
2. If you are running Volume Manager, the CD-ROM will be automatically mounted as **/cdrom/cdrom0**, and you must type only the last command below. Otherwise, you must be logged in as a superuser, and you must type all three of the following commands:

```
mkdir /cdrom/cdrom0 ↵  
/sbin/mount -F hsfs -o ro /dev/dsk/<device name of CD-ROM>  
/cdrom/cdrom0 ↵  
/cdrom/cdrom0/install ↵
```

You are guided through the installation procedure.

Installing the Quartus II Software on Linux Workstations

You can install the Quartus® II software on a PC running Red Hat Linux version 7.1. Before you install the Quartus II software or any Altera® programming hardware, you should read the Quartus II **readme.txt** file, which provides information on Quartus II software and operating requirements, including disk space, memory, and required operating system patches. You should also refer to the *Quartus II Installation & Licensing for UNIX and Linux Workstations* manual and the *Quartus II Software Release Notes* (http://www.altera.com/literature/rn/rn_qts.pdf) for more information.



You must be logged in as a superuser.

To install the Quartus II software on a Linux workstation, follow these steps:

1. Insert the Quartus II Design Software for Linux Workstations (Red Hat Linux Version 7.1 Only) CD-ROM into your CD-ROM drive.
2. Type the following commands at the command prompt:

```
mkdir /mnt/cdrom ↵  
/bin/mount /mnt/cdrom ↵  
/mnt/cdrom/install ↵
```

You are guided through the installation procedure.

Installing the Quartus II Software on HP-UX Workstations

You can install the Quartus® II software on an HP 9000 Series 700/800 workstation running HP-UX 11.0 with ACE dated November, 1999 or later. Before you install the Quartus II software or any Altera® programming hardware, you should read the Quartus II **readme.txt** file, which provides information on Quartus II software and operating requirements, including disk space, memory, and required operating system patches. You should also refer to the *Quartus II Installation & Licensing for UNIX and Linux Workstations* manual and the *Quartus II Software Release Notes* (http://www.altera.com/literature/rn/rn_qts.pdf) for more information.



Your workstation must have an ISO 9660 CD-ROM drive, and you must be logged in as a superuser.

To install the Quartus II software on an HP-UX workstation, follow these steps:

1. Insert the Quartus II Design Software for UNIX Workstations (HP-UX 11.0 only) CD-ROM into your CD-ROM drive.
2. Type the following commands at the command prompt:

```
mkdir /cdrom ↵  
/sbin/mount -o cdcase /dev/dsk/<device name of CD-ROM>  
/cdrom ↵  
/cdrom/install ↵
```

You are guided through the installation procedure. Refer to the *Quartus II Installation & Licensing for UNIX and Linux Workstations* manual for other configuration information.

Installing the SOPC Builder Software

You can install the SOPC Builder system development tool, the complete GNUPro Software Development Toolkit (for ARM® and Nios® processors), and the Nios Embedded Processor–OpenCore® Plus Hardware Evaluation Version on PCs running Windows 2000, Windows NT 4.0, or Windows XP; or on UNIX workstations running Solaris 7 or 8 or HP-UX 11.0. Before installing the SOPC Builder software, you should read the **sopc_builder_readme.txt** file, which provides information on installation and on software and operating requirements, including disk space and memory.

Installing the SOPC Builder Software on PCs

To install the SOPC Builder software on a PC, follow these steps:

1. Insert the SOPC Builder System Development Tool for PCs CD-ROM into your CD-ROM drive. The SOPC Builder Setup program window appears automatically.
2. Click **Install SOPC Builder**.

or

If the Setup program is not already running, you can start it manually: Choose **Run** from the Start menu and type the following command:

<CD-ROM drive>: \setup.exe ↵

The Setup program starts automatically and guides you through the installation process.

Installing the SOPC Builder Software on Solaris Workstations

To install the SOPC Builder software on a Sun Ultra workstation running Solaris 7 or 8, follow these steps:

1. Insert the SOPC Builder System Development Tool for Workstations CD-ROM into your CD-ROM drive.
2. Type the following commands at the command prompt:

```
cd /cdrom/<device name of CD-ROM>/unix ↵  
./install.sh ↵
```

The *<device name of CD-ROM>* is usually *SOPC_Builder27*; however, if you have previously mounted and unmounted this CD-ROM, a number may be appended to the name, in which case you should use the complete name and number. For example, if the device name appears as *SOPC_Builder27#2*, use that name.

You are guided through the installation procedure.

3. Add the following lines to your **.login** or **.cshrc** file:

```
setenv sopc_builder <SOPC Builder software system directory>
```

The *<SOPC Builder software system directory>* is usually **/usr/altera/excalibur/sopc_builder_2_7**; if you use a different directory path, you must substitute the correct path name.

4. If you are planning to use the Model Technology™ ModelSim® simulation software with the Quartus® II software and SOPC Builder software, add the following lines to your **.login** or **.cshrc** file:

```
setenv MG_ROOT /<Quartus II software system directory>/eda/sim_lib/  
    excalibur/stripe_model_solaris/ModelGen/manager  
setenv MG_LIB /<Quartus II software system directory>/eda/sim_lib/  
    excalibur/stripe_model_solaris/ModelGen/manager/  
    SunOS5/MM  
setenv MG_MODEL_PATH /<Quartus II software system directory>/eda/  
    sim_lib/excalibur/stripe_model_solaris/ModelGen/  
    models  
setenv LMC_HOME /<Quartus II software system directory>/eda/  
    sim_lib/excalibur/swift  
setenv PATH "$PATH": /<Quartus II software system directory>/eda/  
    sim_lib/excalibur/swift/lib/sun4Solaris.lib  
setenv MG_MODEL_REV r0  
setenv LMC_CONFIG /<Quartus II software system directory>/eda/  
    sim_lib/excalibur/swift/data/solaris.lmc
```

The *<Quartus II software system directory>* is usually **/usr/quartus**; if you use a different directory path, you must substitute the correct path name.



For additional information about installing the ModelSim software, refer to “Installing the Model Technology ModelSim Software” on page 17.

Installing the SOPC Builder Software on HP-UX Workstations

To install the SOPC Builder software on an HP 9000 Series 700/800 workstation running HP-UX 11.0, follow these steps:

1. Insert the SOPC Builder System Development Tool for Workstations CD-ROM into your CD-ROM drive.
2. Type the following commands at the command prompt:

```
cd /cdrom/<device name of CD-ROM>/unix ↵  
./install.sh ↵
```

The *<device name of CD-ROM>* is usually `SOPC_Builder27`; however, if you have previously mounted and unmounted this CD-ROM, a number may be appended to the name, in which case you should use the complete name and number. For example, if the device name appears as `SOPC_Builder27#2`, use that name.

You are guided through the installation procedure.

3. Add the following line to your `.login` or `.cshrc` file:

```
setenv sopc_builder <SOPC Builder software system directory>
```

The *<SOPC Builder software system directory>* is usually `/usr/altera/excalibur/sopc_builder_2_7`; if you use a different directory path, you must substitute the correct path name.

4. If you are planning to use the Model Technology™ ModelSim® simulation software with the Quartus® II software and SOPC Builder software, add the following lines to your **.login** or **.cshrc** file:

```
setenv MG_ROOT /<Quartus II software system directory>/eda/sim_lib/  
    excalibur/stripe_model_hpux/ModelGen/manager  
setenv MG_LIB /<Quartus II software system directory>/eda/sim_lib/  
    excalibur/stripe_model_hpux/ModelGen/manager/HPUX/  
    MM  
setenv MG_MODEL_PATH /<Quartus II software system directory>/eda/  
    sim_lib/excalibur/stripe_model_hpux/ModelGen/  
    models  
setenv LMC_HOME /<Quartus II software system directory>/eda/  
    sim_lib/excalibur/swift  
setenv PATH "$PATH": /<Quartus II software system directory>/eda/  
    sim_lib/excalibur/swift/lib/hp700.lib  
setenv MG_MODEL_REV r0
```

The *<Quartus II software system directory>* is usually **/usr/quartus**; if you use a different directory path, you must substitute the correct path name.



For additional information about installing the ModelSim software, refer to “Installing the Model Technology ModelSim Software” on page 17.

Installing the MAX+PLUS II Software on PCs

You can install the MAX+PLUS® II software on PCs running Microsoft Windows NT 4.0 (Service Pack 3 or later), Windows 98, Windows 2000, or Windows XP. Before you install the MAX+PLUS II software or any Altera® programming hardware, you should read the MAX+PLUS II **read.me** file, which provides information on MAX+PLUS II software installation and operating requirements, including disk space and memory.

To install the MAX+PLUS II software for PCs, follow these steps:

1. Insert the MAX+PLUS II Design Software for PCs CD-ROM into your CD-ROM drive.
2. Click **Full/Custom/FLEXlm Server** to install the MAX+PLUS II software.

or

If the MAX+PLUS II software CD-ROM is in your CD-ROM drive, and the Setup program is not running, you can start it manually. Choose **Run** (Start menu) and type the following command:

<CD-ROM drive>: \autorun.exe ←

You are guided through the installation procedure. If necessary, you can run the Setup program again to install additional features of the software.

Installing the MAX+PLUS II Software on Solaris Workstations

You can install the MAX+PLUS® II software on a Sun Ultra workstation running Solaris 2.6, 7, or 8. Before you install the MAX+PLUS II software or any Altera® programming hardware, you should read the MAX+PLUS II **read.me** file, which provides information on MAX+PLUS II installation and operating requirements, including disk space and memory.



Your workstation must have an ISO 9660 CD-ROM drive.

To install the MAX+PLUS II software on a Solaris workstation, follow these steps:

1. Insert the MAX+PLUS II Design Software for UNIX Workstations CD-ROM into your CD-ROM drive.
2. If you are running Volume Manager, the CD-ROM will be mounted automatically as `/cdrom/cdrom0`, and you must type only the last of the following commands. Otherwise, you must be logged in as a superuser, and must type all three of the following commands:

```
mkdir /cdrom/cdrom0 ←  
/sbin/mount -F hsfs -o ro /dev/dsk/<device name of CD-ROM>  
/cdrom/cdrom0 ←  
/cdrom/cdrom0/install.cd ←
```

You are guided through the installation procedure. If necessary, you can run the Install script again to install additional features of the software.

Installing the MAX+PLUS II Software on HP-UX Workstations

You can install the MAX+PLUS® II software on an HP 9000 Series 700/800 workstation running HP-UX 11.0 with ACE dated November, 1999 or later. Before you install the MAX+PLUS II software or any Altera® programming hardware, you should read the MAX+PLUS II **read.me** file, which provides information on MAX+PLUS II installation and operating requirements, including disk space and memory.



Your workstation must have an ISO 9660 CD-ROM drive, and you must be logged in as a superuser.

To install the MAX+PLUS II software on an HP-UX workstation, follow these steps:

1. Insert the MAX+PLUS II Design Software for UNIX Workstations CD-ROM into your CD-ROM drive.
2. Type the following commands at the command prompt:

```
mkdir /cdrom ↵  
/sbin/mount -o cdfcase /dev/dsk/<device name of CD-ROM>  
/cdrom ↵  
/cdrom/install.cd ↵
```

You are guided through the installation procedure. If necessary, you can run the Install script again to install additional features of the software.

Installing the ARM Developer Suite Lite Tools for Excalibur Devices on PCs

You can install the ARM® Developer Suite (ADS) Lite tools version 1.1 for Excalibur™ devices on PCs running Microsoft Windows NT 4.0 (Service Pack 3 or later), Windows 98, or Windows 2000. Before you install the ADS Lite tools, you should read the **excalibur_cd_contents.htm** file, which provides information on software and operating requirements, including disk space and memory.

To install the ADS Lite tools on a PC, follow these steps:

1. Insert the ADS Lite Tools Version 1.1 for Excalibur Devices CD-ROM into your CD-ROM drive.
2. Click **Install ADS Lite 1.1** to install the Altera ADS Lite tools.

or

If the ADS Lite tools CD-ROM is in your CD-ROM drive, and the Install program is not running, you can start it manually. Choose **Run** (Start menu) and type the following command:

```
<CD-ROM drive>:\install.exe ↵
```

The Install program guides you through the installation process.

Installing the ARM Developer Suite Lite Tools for Excalibur Devices on Solaris Workstations

You can install the ARM® Developer Suite (ADS) Lite tools version 1.1 for Excalibur™ devices on Sun Ultra workstations running Solaris 2.6 or 7. Before you install the ADS Lite tools, you should read the **excalibur_cd_contents.htm** file, which provides information on software and operating requirements, including disk space and memory.

To install the ADS Lite tools on a Solaris workstation, follow these steps:

1. Insert the ADS Lite Tools Version 1.1 for Excalibur Devices CD-ROM into your CD-ROM drive.
2. If you are running Volume Manager, the CD-ROM will be automatically mounted as **/cdrom/cdrom0**, and you must type only the last command below. Otherwise, you must be logged in as a superuser, and you must type all of the following commands:

```
mkdir /cdrom/cdrom0 ←  
/sbin/mount -F hsfs -o ro /dev/dsk/<device name of CD-ROM>  
/cdrom/cdrom0 ←  
/cdrom/cdrom0/install ←
```

You are guided through the installation procedure.

Installing the Model Technology ModelSim & Mentor Graphics LeonardoSpectrum Software

The Mentor Graphics® LeonardoSpectrum™ **readme** files in the **leonardo** directory and the Model Technology™ ModelSim® **readme** files in the **modelsim** directory on the Altera® VHDL & Verilog HDL Synthesis & Simulation Tools CD-ROM provide information on LeonardoSpectrum and ModelSim software and operating requirements. You should read the appropriate **readme** file before installing the LeonardoSpectrum or ModelSim software.

Installing the Model Technology ModelSim Software

Refer to the Model Technology ModelSim **readme** file in the **modelsim** directory on the CD-ROM for information about ModelSim software installation instructions.

Installing the Mentor Graphics LeonardoSpectrum Software on PCs

To install the Mentor Graphics LeonardoSpectrum software on a PC, follow these steps:

1. Insert the CD-ROM into your CD-ROM drive.
2. Choose **Run** (Start menu) and type the following command:

`<CD-ROM drive>: \leonardo\PC\install.exe` ↩

The Setup program starts automatically and guides you through the installation process. For additional installation and licensing information, refer to the `<CD-ROM drive>:\leonardo\readme_pc.txt` file.

Installing the Mentor Graphics LeonardoSpectrum Software on Solaris Workstations

To install the Mentor Graphics LeonardoSpectrum software on a Sun Ultra workstation running Solaris 7 or 8, follow these steps:



Your workstation must have an ISO 9660 CD-ROM drive.

1. Insert the CD-ROM into your CD-ROM drive.
2. If you are running Volume Manager, the CD-ROM is automatically mounted as `/cdrom/cdrom0`, and you must type only the last two of the following commands. Otherwise, you must be logged in as a superuser, and must type all five of the following commands:

```
mkdir /cdrom/cdrom0 ↵  
mount -F hsfs -o ro /dev/dsk/<device name of CD-ROM> /cdrom/  
cdrom0 ↵  
mkdir <LeonardoSpectrum system directory> ↵  
cd <LeonardoSpectrum system directory> ↵  
tar xvf /cdrom/cdrom0/leonardo/solaris/sunos5.tar ↵
```

For additional installation and licensing information, refer to the `/cdrom/cdrom0/leonardo/readme_unix.txt` file.

Installing the Mentor Graphics LeonardoSpectrum Software on HP-UX Workstations

To install the Mentor Graphics LeonardoSpectrum software on an HP 9000 Series 700/800 workstation running HP-UX 10.2 or 11.0, follow these steps:



Your workstation must have an ISO 9660 CD-ROM drive, and you must be logged in as a superuser.

1. Insert the CD-ROM into your CD-ROM drive.
2. Type the following commands at the UNIX prompt:

```
mkdir /cdrom ↵  
/etc/mount -o cdcase /dev/dsk/<device name of CD-ROM>  
/cdrom ↵  
mkdir <LeonardoSpectrum system directory> ↵  
cd <LeonardoSpectrum system directory> ↵  
tar xvf /cdrom/leonardo/hp/"hp.tar;1" ↵
```

For additional installation and licensing information, refer to the `/cdrom/cdrom0/leonardo/readme_unix.txt` file.

Altera Technical Support

For technical support, you can visit the Altera® web site or mySupport web site, or you can call or fax the Altera Applications Department.

Altera web site	http://www.altera.com (includes the Solutions Database, which is available from the Support section of the Altera web site)
mySupport web site	http://www.altera.com/mysupport (allows you to submit, view, and update technical support service requests)
Telephone	(800) 800-EPLD 7:00 a.m. to 5:00 p.m. Pacific time, M–F (408) 544-7000 7:00 a.m. to 5:00 p.m. Pacific time, M–F
Fax	(408) 544-6401

Altera Product Information

For the latest Altera product information or literature, refer to the Literature section of the Altera web site at <http://www.altera.com>.

Obtaining a License File

You must have a valid, unexpired Altera® license file in order to use the Altera software provided in this package. If you need to obtain a license file, follow these steps:

1. Point your web browser to the Altera web site at <http://www.altera.com>.
2. Click the **Licensing** icon.
3. Specify the requested information.



Altera recommends that you save any previous **license.dat** file in a temporary directory, in case you need to refer to it later.

4. When you receive the license file text, you should either save it to a file with the file name **license.dat**, or copy the lines from the license file to an existing license file. If you are using the **license.dat** file with both the Quartus® II and the MAX+PLUS® II software, Altera recommends that you save your **license.dat** file in a top-level directory named **flexlm**.



For more information, refer to the following literature on the Altera web site:

- *Quartus II Installation & Licensing for PCs manual*
- *Quartus II Installation & Licensing for UNIX and Linux Workstations manual*
- *Application Note 205 (Understanding Altera Software Licensing)*
- *Application Note 229 (Advanced Troubleshooting for Altera Software Licensing)*
- *Quartus II Software Release Notes*



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